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REPORT NO. 7

CANAL ON THE OTTAWA RIVER
A SHORT ECONOMIC EVALUATION

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A SHORT ECONOMIC EVALUATION - CANAL ON THE OTTAWA RIVER

Cost of Ottawa Canal

On March 7th, 1966, a meeting was held in Ottawa with Mr. D.A.H. Farmer, Chief of Canals Division, Department of Transport, and the following estimation of the cost of a nagivation canal on the Ottawa River was presented by the Federal Department of Transport:

1)	Lake Carillon to Lake Deschenes	
	- 2 miles	\$19,800,000
2)	Ottawa to Pembroke	
	- 95 miles	57,700,000
3)	Pembroke to Mattawa	
	- 90 miles	15,500,000
4)	Mattawa to Lake Temiskaming	
	- 25 miles	13,100,000
5)	Mattawa to Lake Nipissing	
	- 38 miles	80,300,000
6)	Lake Nipissing to Georgian Bay	
	- 80 miles	67,400,000
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TOTAL	- 330 miles	\$253,800,000

From the above, it is obvious that the canal from Ottawa to Pembroke would cost \$77.5 million, from Ottawa to Mattawa \$93 million, and if the canal were extended to Temiskaming, the total cost would increase to \$106.1 million.

The complete canal from the Ottawa River via Mattawa, Lake Nipissing to Georgian Bay would cost \$253.8 million.

According to Mr. Farmer, the cost was estimated on the current cost of materials and present construction techniques. The proposed locks would be 45 feet in width, 188 feet in length, and have 14 foot draught, making possible the use of barges of up to 2000 tons.

Present industrial use of the canal would be minute, as industrial use of that part of the Ottawa River which is navigable between Montreal and Ottawa represents only one per cent. (Steel used for the construction of the bridge over the Ottawa River close to Ottawa was transported by barge.) Of course, there is the possibility that when the canal is completed from Ottawa up to Georgian Bay, industrial use would be intensified. That is the reason why the Department of Transport is insistent that locks be built large enough to handle barges, and it should be remembered a canal is built for use over a period of several hundreds of years, providing it is properly maintained. (The Rideau Canal was built one hundred years ago.) However over-all industrial use would be very small, and therefore use by tourists would likely be the only source of revenue for some time.

It is likely that funds available for canals would be utilized on more urgent projects, such as maintenance and improvement of existing canals. For instance:



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- 1) Construction of the Big Chute Lock on the Trent Canal to replace the existing railway which is the cause of much delay in the handling of boats, and in addition, prohibits passage of boats over 50 ft. in length and over 20 short tons in weight. (There is no need to emphasize that larger boats spend more money, as they are likely to carry more passengers, and therefore create more tourist expenditure in areas adjacent to the canal.)

The evaluation of the lamprey problem has, it appears, not been completed as yet. Construction of the Big Chute lock has been delayed for this reason.

- 2) Consideration of a connecting canal between the Trent Canal and the Muskoka Lakes.
- 3) Rebuilding of some of the locks on the Rideau Canal.

It is Mr. Farmer's opinion that priority should be given to the above projects and the Ottawa - Georgian Bay Canal started later, when it is economically more favourable.

Approximately fifteen years from now, if the present yearly increase of 10 to 12 per cent in boats using the Trent Canal continues, the capacity of the canal will be saturated. Maximum capacity, after a few improvements will be 40,000 pleasure boats per year. This

figure may seem somewhat low, but as pleasure boats are used mainly during a short ten week period in Summer, it is understandable that it would be somewhat difficult to increase the maximum capacity.

As stated before, Mr. Farmer feels that the Ottawa - Georgian Bay Canal might be built to coincide with the saturation point of the Trent. This would be a matter of Government policy. It is obvious that this coincidence would be advantageous because all additional yearly pleasure boat traffic could make use of the Ottawa Canal, immediately creating a sizeable amount of traffic and expenditure on the Ottawa Canal. If the Ottawa Canal were to be built now, the yearly additional traffic would be absorbed by all three canals.

Present Use of Trent Canal

Trent Canal authorities have calculated that in 1956, approximately 2,700 boats used this canal, and in 1965, almost 10,600. This is an increase of 392.6 in ten years, approximately 40 per cent per year. This increase has likely slowed down, so that between 1964 and 1965 an increase of 10 to 12 per cent in boat traffic was produced.

Another important fact was discovered during a sample carried out by officials of our Development Branch in which a sampling of 76 craft of various kinds using the Trent Canal, revealed that an average of \$354 per boat was spent on the Trent Canal in 1965. Taking into account that 10,600 boats used the Trent Canal, this means that the total expenditure of boats in 1965 was \$3.8 million. If maintenance and operation costs in the amount of \$909,600 are added, we arrive at a figure of \$4.7 million.

This amount was spent in an area without many industries, with the exception of Peterborough and a few other towns, and therefore, we could say that for each dollar spent by users of pleasure craft, and by the Federal Department of Transport in connection with their canals, a multiple effect was created. If the multiplier amounts to two this means that an economic activity of an order of \$10 million was created by the existence and use of the Trent Canal.

Estimation on Potential Economic
Impact of the Ottawa Canal

The greatest problem in estimating the economic impact of the Ottawa Canal is in determining the number of pleasure boats using the canal during the first year of operation. Mr. Farmer believes that based on their present knowledge, it would be a maximum of 5,000 boats.

Neither the Trent nor Rideau canals are as yet saturated. If they were, then traffic on the Ottawa Canal during the first year of operation could be higher.

Supposing that during the first year of use, the number of craft using the Ottawa Canal was 5,000, the next problem then, is that of yearly increase.

There are two possibilities in the calculation of yearly increase, both of which are revealed to us by the existing trend on the Trent Canal. As mentioned before, between 1956 and 1965, there was an increase in the number of boats on the Trent Canal of 392.6 per cent, approximately 40 per cent per year. It was also stated that of late, this increase has levelled down to 10 to 12 per cent a year. Both increase factors are used here for alternative estimates.

Alternative I

Suppose the number of boats on the Ottawa Canal were to increase approximately 400 per cent in 10 years, taking 5,000 boats as a base, after 10 years, 20,000 boats would be using the Ottawa Canal, and, after 20 years, 80,000 boats. Data from the Trent Canal showed that the average yearly expenditure per boat amounted to \$354.51. This amount is likely to increase every year because of inflation and also because of escalating standard of living of pleasure-boat tourists. Therefore we can estimate that the spending per boat, on the Ottawa Canal, (at the present time,) would amount at least to \$400 per boat per year.

Total spending on the Ottawa Canal in the first, tenth and twentieth years would be as follows:

Number of Boats	Average Total Expenditure per Boat, per Season, using the Ottawa Canal	Total Expenditure
(1)	(2)	(1) X (2) = (3)
1st year - 5,000	\$400	\$2,000,000
10th year - 20,000	\$400	\$8,000,000
20th year - 80,000	\$400	\$32,000,000

Spending during the first year would amount to \$2 million, the tenth year, to \$8 million, and to \$32 million the twentieth year.

There are many unknowns in connection with these figures but on the one hand there is the fact that we have used a highly optimistic increase ratio of 400 per cent increase of boat traffic in ten years, for two consecutive decades, and the other unknown is the total spending on the Ottawa Canal.

Present spending on the Trent Canal would suggest that the total spending per boat would amount approximately to \$400 per boat per season, but this could be smaller, because of lack of facilities, i.e., restaurants, marinas, shops, etc. on the Ottawa Canal, where money could be spent. On the other hand it could be larger, because the canal from Ottawa to Temiskaming would be longer than the Trent, therefore cruises would be longer and consequently, more money spent.

The greatest unknown factor is the amount of appeal the Ottawa Canal would have for tourists. The Trent Canal passes through an established tourist area, has many historic sites, a number of pleasant towns, and many scenic attractions. The Ottawa Canal, on the other hand, at least not at present, and possibly for quite a number of years, would not have the attraction and appeal of the Trent Canal.

We should not forget that the Trent canal passes through or near, areas (Huronian - Lake Simcoe, Muskoka, Kawartha Lakes, etc.) where at least 50 per cent of all the cottages in Ontario are located. We could not as yet make such a statement for the Ottawa Canal. Pleasure craft, although independent of cottages, tend to go wherethere is a concentration of cottages, tourist activities and attractions, as well as facilities. For instance, the visiting of friends by boat would occur most frequently in a densely cottage-populated area.

As mentioned previously, there was an increase of 10 per cent in the number of boats using the Trent Canal in 1965 compared with 1964. If this increase ratio is applied to the base of 5,000 for the first year, then after 16 years, 20,800 boats would be using the Ottawa Canal, and after 30 years, approximately 80,000.

Alternative II

Revenue generated by this number of boats would be as follows:

Ten Per Cent Yearly Increase

Number of Boats		Average Total Expenditure per Boat, per Season, using the Ottawa Canal	Total Expenditure
(1)		(2)	(1) X (2) = (3)
1st year -	5,000	\$400	\$2,000,000
16th year -	20,887	\$400	8,354,800
30th year -	79,318	\$400	31,727,200

Mr. Farmer believes that 80,000 boats would be the ceiling for the Ottawa Canal, compared with 40,000 boats on the Trent Canal. As in the Trent Canal, the same short summer season is a factor.

The Ottawa River is larger, could handle a maximum capacity of 80,000 boats per year, and locks would be built accordingly.

Use of the Ottawa River by the logging industry for transportation of logs creates a problem. If the canal is to be built, the logging industry should be compelled to move their logs in the form of compact, better-controlled rafts. Also, sunken logs are extremely dangerous to boating, and these should all be cleared out.

Multiplier Factor

As mentioned previously, the multiplier factor of "2" could be applied to the spending of tourists on the Trent Canal. In the case of the Ottawa Canal, which covers an under-developed area, the multiplier of "2" could also be used. (See Table attached.)

This Table shows that if the multiplier of "2" is applied to the total expenditure generated by boats using the Ottawa Canal. in the first alternative, expenditure would amount to \$4 million in the first year, \$16 million after ten years, and to \$64 million after twenty years.

In the second alternative, and providing that the multiplier is "2". the value of total economic activity created by the spending of tourists on the Ottawa Canal could be \$4 million the first year, \$16.8 million the 16th year, and \$63.4 million the thirtieth year..

Conclusion

It was mentioned at the beginning of the Report that the Canal from Ottawa to Temiskaming would cost approximately \$106 million. The Ottawa River from Montreal up to Temiskaming

Value of Total Economic Activity Created by the Spending of Boats
on the Ottawa Canal - if the Multiplier Factor is "2"

1st Alternative

400 Per Cent Increase in Number of Boats each Decade

Year	Number of Boats	Total Expenditure (\$400 per Boat)	Total - if Multiplier of "2" is Applied
1st	5,000	\$2,000,000	\$4,000,000
10th	20,000	\$8,000,000	\$16,000,000
16th	-	-	-
20th	80,000	\$32,000,000	\$64,000,000
30th	-	-	-

2nd Alternative

10 Per Cent Increase in Number of Boats each Year

Number of Boats	Total Expenditure (\$400 per Boat)	Total - if Multiplier of "2" is Applied
5,000	\$2,000,000	\$4,000,000
-	-	-
20,887	\$8,400,000	\$16,800,000
-	-	-
79,318	\$31,700,000	\$63,400,000

would eventually, after a period of about thirty years, activate the spending by boats of approximately \$30 million and a corresponding economic activity (if the multiplier "2" is applied) of approximately \$64 million. If the increase of canal use is faster (first alternative), the above results would be reached after twenty years.

It should be emphasized that the above conclusions are based on many suppositions, the main one being that the tourist appeal of the Ottawa Canal will be equal to that of the Trent Canal.



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